

# Notice of Allowability

Application No.

10/061,474

Examiner

Belix M. Ortiz

Applicant(s)

TEIG ET AL.

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Phone interview after non-final filed 8/16/07.
2. ☒ The allowed claim(s) is/are 1-14, 17-21 and 25-35.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 1/4/08.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
CHARLES RONES  
SUPERVISORY PATENT EXAMINER

## DETAILED ACTION

### EXAMINER'S AMENDMENT

1. The following is an Examiner's statement of reasons for the indication of allowable subject matter: The prior art of record does not disclose, make obvious, or otherwise suggest the structure of the applicant's prediction program, prediction apparatus, and prediction method together with the other limitations of the independent claims.

The dependent claims being further limiting and definite are also allowable. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Authorization for this examiner's amendment was given in an interview with Arman Katiraei on January 4, 2008.

### AMENDMENT TO THE CLAIMS:

Claims 12-14, 17-21, and 30 have been amended claims 34-35 have been added. Claims 1-14, 17-21, and 25-35 remain pending in the application.

### WHAT IS CLAIMED IS:

12. (Currently Amended) A sub-network ~~record~~ retrieval management system stored on a computer-readable medium, the sub-network management system comprising:

a) a data storage structure stored on a computer-readable medium, data storage structure storing a plurality of combinational-logic sub-networks,

wherein a particular sub-network comprises a first circuit for performing a first output function that produces a first result outside the sub-network and a second circuit for performing a second output function that produces a second result outside the sub-network,

wherein the first circuit directly or indirectly receives as an input the second result produced by second circuit,

wherein the data storage structure stores the particular sub-network based on a parameter derived from at least the first and second output functions of the particular sub-network, the parameter being used to retrieve the particular sub-network from the data storage structure; and

b) a data access manager for identifying and retrieving sub-networks from the data storage structure.

13. (Currently Amended) The ~~record~~ retrieval management system of claim 12, wherein when the data access manager receives a parameter, the manager searches the data storage structure for sub-networks that are stored based on the received parameter, and if the manager finds a sub-network that is stored based on the received parameter, the manager retrieves the sub-network.

14. (Currently Amended) The ~~record~~ retrieval management system of claim 13, wherein the parameter for the particular sub-network is a set of indices for storing the particular sub-network in the storage structure, wherein the set of indices includes an index for each function performed by the particular sub-network.

17. (Currently Amended) The ~~record~~ retrieval management system of claim 13, wherein the set of indices for the particular sub-network includes a primary index and a set of secondary indices.

18. (Currently Amended) The ~~record~~ retrieval management system of claim 17, wherein the set of secondary indices for a sub-network that only performs one function is empty.

19. (Currently Amended) The ~~record~~ retrieval management system of claim 17, wherein the particular sub-network receives a set of inputs, and the particular sub-network's primary index is the index derived from a pivot function of the particular sub-network that depends on all the inputs in the particular sub-network's set of inputs.

20. (Currently Amended) The ~~record~~ retrieval management system of claim 17, wherein when the manager receives a set of indices, the manager searches the data storage structure to find a set of indices that match the received set of indices, and if the manager finds a matching set, the manager retrieves the sub-network identified by the matching set.

21. (Currently Amended) The ~~record~~ retrieval management system of claim 20, wherein for each particular index pair formed by the received primary index and one of the received secondary indices,

the manager identifies each sub-network stored in the storage structure that is associated with the particular index pair,

the manager then determines whether any of the identified sub-networks are associated with all the index pairs, and

if so, the manager retrieves any sub-network that is associated with all index pairs.

30. (Currently Amended) A data storage structure stored on a computer-readable medium, the data storage structure storing a plurality of combinational-logic sub-networks,

wherein a particular sub-network comprises a first circuit for performing a first output function that produces a first result outside the sub-network based on a plurality of inputs received by the particular sub-network and a second circuit for performing a second output function that produces a second result outside the sub-network based on a set of inputs that is less than the plurality of inputs,

wherein at least one input in the set of inputs that produces the second result is based on the first result produces by the first output function, and

wherein the particular sub-network is stored based on a set of indices comprising (i) a first index derived from the first output function and (ii) a second index derived from the second output function.

34. (New) The method of claim 30, wherein the one input in the set of inputs that produces the second result is the first result produced by the first output function.

35. (New) The method of claim 30, wherein the one input in the set of inputs that produces the second result is derived from the first result produced by the first output function.

**Reasons for Allowance**

2. Claims 1-14, 17-21, and 25-35 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:  
the prior arts of records, neither anticipates nor renders obvious the following  
limitations as claimed:

As to claims 1 and 12, the prior art of records fail to anticipate or suggest a data storage structure stored on a computer-readable medium, data storage structure storing a plurality of combinational-logic sub-networks,

wherein a particular sub-network comprises a first circuit for performing a first output function that produces a first result outside the sub-network and a second circuit for performing a second output function that produces a second result outside the sub-network,

wherein the first circuit directly or indirectly receives as an input the second result produced by second circuit, and

wherein the data storage structure stores the particular sub-network based on a parameter derived from at least the first and second output functions of the particular sub-network, the parameter being used to retrieve the particular sub-network from the data storage structure, together with the other limitations of the dependent claims.

As to claim 30, the prior art of records fail to anticipate or suggest wherein a particular sub-network comprises a first circuit for performing a first output function that produces a first result outside the sub-network based on a plurality of inputs received by the particular sub-

network and a second circuit for performing a second output function that produces a second result outside the sub-network based on a set of inputs that is less than the plurality of inputs,

wherein at least one input in the set of inputs that produces the second result is based on the first result produces by the first output function, and

wherein the particular sub-network is stored based on a set of indices comprising (i) a first index derived from the first output function and (ii) a second index derived from the second output function.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Belix M. Ortiz whose telephone number is 571-272-4081.

The examiner can normally be reached on 8-5. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bmo

January 4, 2008

  
CHARLES RONES  
SUPERVISORY PATENT EXAMINER